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| 10/764,175 | 01/23/2004 | Purva R. Rajkotia | 2003.09.005.WS0 | 7867 |

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| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/764,175 | RAJKOTIA, PURVA R. | |
| | Examiner | Art Unit | |
| | Marisol Figueroa | 2617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *13 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on 11/13/2006. The rejections not addressed below have been withdrawn. Claims 1-30 are pending in the present application.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1, 7, 13, 19, and 25 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments with respect to the disqualification of Chun et al. (US 2002/0068586 A1) as prior art under 35 U.S.C. 103(c) because the subject matter of Chun and the invention claimed in the present application were, at the time of the invention was made, owned by the same person (page 13, lines 6-16) have been fully considered but they are not persuasive.

Chun et al. was published on June 6, 2002 and the present application was filed on January 23, 2004. Therefore, Chun et al. qualify as prior art under 35 U.S.C. 102(b) and consequently is not disqualified as prior art under 35 U.S.C. 103(c). See MPEP 706.02(l) [R-3].

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, this action is made FINAL.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1-3, 7-9, and 13-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of KIM et al. (US 6,418,322 B1).

**Regarding claim 1**, For use in a wireless network, Applicant's description of the Prior Art, discloses a base station capable of releasing a call between said base station and a mobile station during a call set-up procedure, said base station comprising:

a preamble frame detector capable of detecting preamble frames transmitted to said base station by said mobile station during said call set-up procedure; and said base station transmitting null frames during said call set-up procedure (Fig. 3; page 17, paragraph [0043] of the specification; during call set up the Base Station 101 sends a series of null frames to the mobile station 111 on a first frequency channel and after the mobile station receives two good null frames the mobile station starts sending preamble frames which the Base Station receives or detects, the transmissions of the null and preamble frames between the Base Station and mobile station occurs simultaneously).

But, Applicant's Admission of the Prior Art fails to particularly disclose wherein the base station comprises a transmit power controller capable of adjusting a power level of null frames transmitted by the base station.

However, adjusting the power level of frames transmitted by a base station is well known in the art and Kim is evidence of the fact. Kim, in an analogous field of invention, teaches a method of forward power control in a cellular mobile telecommunication system having a base station and a mobile station in which the base station changes its parameters of the forward power control in order to maintain the quality of the forward link (abstract).

The mobile station receives forward frames from a base station and periodically sends to the base station a power measurement report (PMRM) regarding the forward frames (col. 5, lines 11-37; i.e., null frames). When the mobile station does not receive a forward signal (i.e., forward/null

frames) the mobile station is unable to transmit the PMRM to the base station, and when the base station does not receive any PMRM from the mobile station within a predetermined period, then the base station changes its parameter to increase the digital gain to increase the transmission power so that the mobile station can receive the forward frames (i.e., adjusting power of frames transmitted by the base station) and transmit the PMRM. Therefore, as a result of improving the quality of the forward link by the increase in the digital gain and consequently transmission power, the mobile station is able to receive two forward frames consecutively and restart transmission of the PMRM (col. 6, lines 26-49).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art to provide a base station with a transmit power controller capable of adjusting a power level of frames transmitted by said base station, as suggested by Kim, in order to improve or maintain the quality of the forward link (i.e., forward or null frames) so that the mobile station is able to receive two good frames consecutively from the base station (col. 6, lines 29-36, 45-49) and start transmission of the preamble frames.

**Regarding claim 2,** the combination of Applicant's description of prior art and Kim disclose the base station as set forth in Claim 1, Kim discloses wherein said preamble frame detector of said base station is capable of detecting at least one missing preamble frame from said mobile station; and wherein in response to said detection of said at least one missing preamble frame from said mobile station, said transmit power controller increases a power level of null frames transmitted by said base station (col. 5, lines 11-37; col. 6, lines 26-49; the base station receives the PMRMs from the mobile station (fairly characterized as preamble frames since the MS transmit them in response to the reception of forward/null frames transmitted by the BS) and when it detect the failure of the reception of a PMRM within a predetermined time (i.e., missing preamble), the base station changes

its parameters to increase the digital gain to increase the transmission power of the forward frames so that the mobile station can receive the forward frames).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art to include in the base station the features of wherein the preamble frame detector of said base station is capable of detecting at least one missing preamble frame from said mobile station; and wherein in response to said detection of said at least one missing preamble frame from said mobile station, said transmit power controller increases a power level of null frames transmitted by said base station, as suggested by Kim, in order to improve the quality of the forward link (i.e., forward or null frames) so that the mobile station is able to receive two good frames consecutively from the base station (col. 6, lines 29-36, 45-49) and start transmission of the preamble frames.

**Regarding claim 3**, the combination of Applicant's description of the prior art and Kim disclose, the base station as set forth in Claim 2, Kim discloses wherein said transmit power controller increases said power level of null frames by a step size having a configurable value (col. 6, lines 29-36; the transmission power is increased by a "second big up delta").

**Regarding claim 7**, Applicant's description of the prior art discloses a wireless network comprising a plurality of base stations, each of said plurality of base stations capable of releasing a call between said base station and a mobile station during a call set-up procedure, wherein said each base station comprises:

a preamble frame detector capable of detecting preamble frames transmitted to said base station by said mobile station during said call set-up procedure; and said base station transmitting null frames during said call set-up procedure (Fig. 3; page 17, paragraph [0043] of the specification; during call set up the Base Station 101 sends a series of null frames to the mobile

station 111 on a first frequency channel and after the mobile station receives two good null frames the mobile station starts sending preamble frames which the Base Station receives or detects, the transmissions of the null and preamble frames between the Base Station and mobile station occurs simultaneously).

But, Applicant's Admission of the Prior Art fails to particularly disclose wherein the base station comprises a transmit power controller capable of adjusting a power level of null frames transmitted by the base station.

However, adjusting the power level of frames transmitted by a base station is well known in the art and Kim is evidence of the fact. Kim, in an analogous field of invention, teaches a method of forward power control in a cellular mobile telecommunication system having a base station and a mobile station in which the base station changes its parameters of the forward power control in order to maintain the quality of the forward link (abstract).

The mobile station receives forward frames from a base station and periodically sends to the base station a power measurement report (PMRM) regarding the forward frames (col. 5, lines 11-37; i.e., null frames). When the mobile station does not receive a forward signal (i.e., forward/null frames) the mobile station is unable to transmit the PMRM to the base station, and when the base station does not receive any PMRM from the mobile station within a predetermined period, then the base station changes its parameter to increase the digital gain to increase the transmission power so that the mobile station can receive the forward frames (i.e., adjusting power of frames transmitted by the base station) and transmit the PMRM. Therefore, as a result of improving the quality of the forward link by the increase in the digital gain and consequently transmission power, the mobile station is able to receive two forward frames consecutively and restart transmission of the PMRM (col. 6, lines 26-49).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art to provide a base station with a transmit power controller capable of adjusting a power level of frames transmitted by said base station, as suggested by Kim, in order to improve or maintain the quality of the forward link (i.e., forward or null frames) so that the mobile station is able to receive two good frames consecutively from the base station (col. 6, lines 29-36, 45-49) and start transmission of the preamble frames.

**Regarding claim** 8, the combination of Applicant's description of prior art and Kim disclose the wireless network as set forth in Claim 7, Kim discloses wherein said preamble frame detector of said base station is capable of detecting at least one missing preamble frame from said mobile station; and wherein in response to said detection of said at least one missing preamble frame from said mobile station, said transmit power controller increases a power level of null frames transmitted by said base station (col. 5, lines 11-37; col. 6, lines 26-49; the base station receives the PMRMs from the mobile station (fairly characterized as preamble frames since the MS transmit them in response to the reception of forward/null frames transmitted by the BS) and when it detect the failure of the reception of a PMRM within a predetermined time (i.e., missing preamble), the base station changes its parameters to increase the digital gain to increase the transmission power of the forward frames so that the mobile station can receive the forward frames).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art to include in the base station the features of wherein the preamble frame detector of said base station is capable of detecting at least one missing preamble frame from said mobile station; and wherein in response to said detection of said at least one missing preamble frame from said mobile station, said transmit power controller increases a power level of null frames transmitted by said base station, as suggested by Kim, in order to improve the

quality of the forward link (i.e., forward or null frames) so that the mobile station is able to receive two good frames consecutively from the base station (col. 6, lines 29-36, 45-49) and start transmission of the preamble frames.

**Regarding claim 9**, the combination of Applicant's description of the prior art and Kim disclose, the wireless network as set forth in Claim 8, Kim discloses wherein said transmit power controller increases said power level of null frames by a step size having a configurable value (col. 6, lines 29-36; the transmission power is increased by a "second big up delta").

**Regarding claim 13**, For use in a wireless network, Applicant's description of the Prior Art, discloses a method of operating a base station during a call set-up procedure, the method comprising the steps of:

transmitting null frames from said base station to a mobile station during the call set-up procedure; during the call set-up procedure, detecting in a preamble frame detector of said base station preamble frames from said mobile station (Fig. 3; page 17, paragraph [0043] of the specification; during call set up the Base Station 101 sends a series of null frames to the mobile station 111 on a first frequency channel and after the mobile station receives two good null frames the mobile station starts sending preamble frames which the Base Station receives or detects, the transmissions of the null and preamble frames between the Base Station and mobile station occurs simultaneously).

But, Applicant's Admission of the Prior Art fails to particularly disclose wherein the method comprising the step of adjusting a power level of said null frames transmitted to said mobile station by said base station.

However, adjusting the power level of frames transmitted by a base station is well known in the art and Kim is evidence of the fact. Kim, in an analogous field of invention, teaches a method of

forward power control in a cellular mobile telecommunication system having a base station and a mobile station in which the base station changes its parameters of the forward power control in order to maintain the quality of the forward link (abstract).

The mobile station receives forward frames from a base station and periodically sends to the base station a power measurement report (PMRM) regarding the forward frames (col. 5, lines 11-37; i.e., null frames). When the mobile station does not receive a forward signal (i.e., forward/null frames) the mobile station is unable to transmit the PMRM to the base station, and when the base station does not receive any PMRM from the mobile station within a predetermined period, then the base station changes its parameter to increase the digital gain to increase the transmission power so that the mobile station can receive the forward frames (i.e., adjusting power of frames transmitted by the base station) and transmit the PMRM. Therefore, as a result of improving the quality of the forward link by the increase in the digital gain and consequently transmission power, the mobile station is able to receive two forward frames consecutively and restart transmission of the PMRM (col. 6, lines 26-49).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art to include the step of adjusting a power level of the frames transmitted by said base station to a mobile station, as suggested by Kim, in order to improve or maintain the quality of the forward link (i.e., forward or null frames) so that the mobile station is able to receive two good frames consecutively from the base station (col. 6, lines 29-36, 45-49) and start transmission of the preamble frames.

**Regarding claim 14**, the combination of Applicant's description of prior art and Kim disclose the method as set forth in Claim 13, Kim discloses further comprising the steps of detecting at least one missing preamble frame from said mobile station; and in response to said detection of

said at least one missing preamble frame from said mobile station, increasing a power level of null frames transmitted by said base station (col. 5, lines 11-37; col. 6, lines 26-49; the base station receives the PMRMs from the mobile station (fairly characterized as preamble frames since the MS transmit them in response to the reception of forward/null frames transmitted by the BS) and when it detect the failure of the reception of a PMRM within a predetermined time (i.e., missing preamble), the base station changes its parameters to increase the digital gain to increase the transmission power of the forward frames so that the mobile station can receive the forward frames).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art call set-up procedure to incorporate the steps of detecting at least one missing preamble frame from said mobile station; and in response to said detection of said at least one missing preamble frame from said mobile station, increasing a power level of null frames transmitted by said base station, as suggested by Kim, in order to improve the quality of the forward link (i.e., forward or null frames) so that the mobile station is able to receive two good frames consecutively from the base station (col. 6, lines 29-36, 45-49) and start transmission of the preamble frames.

**Regarding claim 15**, the combination of Applicant's description of the prior art and Kim disclose, the method as set forth in Claim 15, Kim discloses wherein said power level of said null frames is increased by a step size having a configurable value (col. 6, lines 29-36; the transmission power is increased by a "second big up delta").

7. **Claims 4, 5, 10, 11, 16, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over KIM et al. in view of BROOKS et al. (US 2002/0090947A1).

**Regarding claim 4**, the combination of Applicant's description of the prior art and Kim disclose the base station as set forth in claim 2, but does not particularly disclose wherein said base station further comprises: a fade timer having a configurable value; wherein said base station starts said fade timer when said preamble frame detector detects at least one missing preamble frame from said mobile station; and wherein said base station stops sending said null frames to said mobile station when said preamble frame detector detects at least one missing preamble frame from said mobile station.

However, Brooks teaches in paragraph 0023, a base station that monitors the reverse link for reverse traffic channels frames (i.e., preamble) and detects a drop call when it does not receive reverse traffic channels frames for a period of time, typically 5 seconds (i.e., fade timer), which makes the base station to end the transmission on the forward traffic channel (i.e., null frames).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the base station to include the features of comprising a fade timer having a configurable value; wherein said base station starts said fade timer when said preamble frame detector detects at least one missing frame from said mobile station, and wherein the base station stops sending said null frames to said mobile stations when said preamble frame detects at least one missing frame from said mobile station, as suggested by Brooks, because it is well known in the art for a base station to comprise a fade timer for detecting a drop call in order to free up communication resources of the base station when a connection is in bad condition as detected by the loss of the reverse link.

**Regarding claim 5**, the combination of Applicant's description of the prior art, Kim, and Brooks disclose the base station as set forth in Claim 4, Brooks discloses wherein said base station releases said call between said base station and said mobile station when one of: said fade timer

expires and a maximum power level for said null frames is exceeded (p.0023; the base station drops the call when it does not receive the reverse traffic channel frames for a period of time, i.e., fade timer).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the base station to include the features of releasing said call between said base station and said mobile station when one of: said fade timer expires and a maximum power level for said null frames is exceeded, as suggested by Brooks, because when connections continue to deteriorate for an entire period of time of the fade timer, the connections are useless.

**Regarding claim 10**, the combination of Applicant's description of the prior art and Kim disclose the wireless network as set forth in Claim 8, but does not particularly disclose wherein said each base station further comprises: a fade timer having a configurable value; wherein said each base station starts said fade timer when said preamble frame detector detects at least one missing preamble frame from said mobile station; and wherein said each base station stops sending said null frames to said mobile station when said preamble frame detector detects at least one missing preamble frame from said mobile station.

However, Brooks teaches in paragraph 0023, a base station that monitors the reverse link for reverse traffic channels frames (i.e., preamble) and detects a drop call when it does not receive reverse traffic channels frames for a period of time, typically 5 seconds (i.e., fade timer), which makes the base station to end the transmission on the forward traffic channel (i.e., null frames).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the base station to include the features of comprising a fade timer having a configurable value; wherein said base station starts said fade timer when said preamble frame detector detects at least one missing frame from said mobile station, and wherein the base station

stops sending said null frames to said mobile stations when said preamble frame detects at least one missing frame from said mobile station, as suggested by Brooks, because it is well known in the art for a base station to comprise a fade timer for detecting a drop call in order to free up communication resources of the base station when a connection is in bad condition as detected by the loss of the reverse link.

**Regarding claim 11**, the combination of Applicant's description of the prior art, Kim, and Brooks disclose the wireless network as set forth in Claim 10, Brooks discloses wherein said each base station releases said call between said each base station and said mobile station when one of: said fade timer expires and a maximum power level for said null frames is exceeded (p.0023; the base station drops the call when it does not receive the reverse traffic channel frames for a period of time, i.e., fade timer).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, o modify the base station to include the features of releasing said call between said base station and said mobile station when one of: said fade timer expires and a maximum power level for said null frames is exceeded, as suggested by Brooks, because when connections continue to deteriorate for an entire period of time of the fade timer, the connections are useless.

**Regarding claim 16**, the combination of Applicant's description of the prior art and Kim disclose the method as set forth in Claim 14, but does not particularly disclose further comprising the steps of: providing in said base station a fade timer that has a configurable value; starting said fade timer when said preamble frame detector detects at least one missing preamble frame from said mobile station; and stopping a transmission of said null frames to said mobile station when said preamble frame detector detects at least one missing preamble frame from said mobile station.

However, Brooks teaches in paragraph 0023, a base station that monitors the reverse link for reverse traffic channels frames (i.e., preamble) and detects a drop call when it does not receive reverse traffic channels frames for a period of time, typically 5 seconds (i.e., fade timer), which makes the base station to end the transmission on the forward traffic channel (i.e., null frames).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the base station to include the features of comprising a fade timer having a configurable value; wherein said base station starts said fade timer when said preamble frame detector detects at least one missing frame from said mobile station, and wherein the base station stops sending said null frames to said mobile stations when said preamble frame detects at least one missing frame from said mobile station, as suggested by Brooks, because is its well known in the art for a base station to comprise a fade timer for detecting a drop call in order to free up communication resources of the base station when a connection is in bad condition as detected by the loss of the reverse link.

**Regarding claim 17**, the combination of Applicant's description of the prior art, Kim, and Brooks disclose the method as set forth in claim 16, Brooks discloses further comprising the step of: releasing a call between said base station and said mobile station when one of: said fade timer expires and a maximum power level for said null frames is exceeded (p.0023; the base station drops the call when it does not receive the reverse traffic channel frames for a period of time, i.e., fade timer).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to include the step of wherein the base station releases said call between said base station and said mobile station when one of: said fade timer expires and a maximum power level for

said null frames is exceeded, as suggested by Brooks, because when connections continue to deteriorate for the entire period of time of the fade timer, the connections are useless.

8. **Claims 6, 12, and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art, in views of KIM et al. and BROOKS et al., and further in view of CHUN et al. (US 2002/0068586 A1).

**Regarding claim 6**, the combination of Applicant's description of the prior art, Kim, and Brooks disclose the base station as set forth in claim 4, but does not particularly disclose wherein said configurable value of said fade timer is less than five seconds.

However, Chun teaches that a fade timer can range from 0 to 10 seconds depending on a system operation state, and in his invention is preferably set to 1.2 seconds which is a shorter time than the typical 5 seconds for releasing a call in the prior art (p.0070).

Therefore, it would have been obvious matter of design choice to a person having ordinary skill in the art, to configure said fade timer to a value of less than five seconds, as suggested by Chun, because this value varies depending on the operation of the system and subscriber characteristics.

**Regarding claim 12**, the combination of Applicant's description of the prior art, Kim, and Brooks disclose the wireless network as set forth in claim 10, but does not particularly disclose wherein said configurable value of said fade timer is less than five seconds.

However, Chun teaches that a fade timer can range from 0 to 10 seconds depending on a system operation state, and in his invention is preferably set to 1.2 seconds which is a shorter time than the typical 5 seconds for releasing a call in the prior art (p.0070).

Therefore, it would have been obvious matter of design choice to a person having ordinary skill in the art, to configure said fade timer to a value of less than five seconds, as suggested by

Chun, because this value varies depending on the operation of the system and subscriber characteristics.

**Regarding claim 18**, the combination of Applicant's description of the prior art, Kim, and Brooks disclose the method as set forth in claim 16, but does not particularly disclose wherein said configurable value of said fade timer is less than five seconds.

However, Chun teaches that a fade timer can range from 0 to 10 seconds depending on a system operation state, and in his invention is preferably set to 1.2 seconds which is a shorter time than the typical 5 seconds for releasing a call in the prior art (p.0070).

Therefore, it would have been obvious matter of design choice to a person having ordinary skill in the art, to configure said fade timer to a value of less than five seconds, as suggested by Chun, because this value varies depending on the operation of the system and subscriber characteristics.

9. **Claims 19-21, and 25-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of RAAF et al. (US 2004/0029604 A1).

**Regarding claims 19**, For use in a wireless network, Applicants' description of the prior art, discloses a mobile station capable of releasing a call between said mobile station and a base station during a call set-up procedure, said mobile station comprising:

a main processor; a null frame monitor program capable of detecting null frames transmitted to said mobile station by said base station during said call set-up procedure; and a transmit program for transmitting preamble frames during said call set-up procedure (Fig. 3; page 17, paragraph [0043] of the specification; during call set up the Base Station 101 sends a series of null frames which are received by the mobile station 111, the mobile station sends preamble frames in response to the null frames).

But, the Applicant's description of the prior does not particularly disclose wherein the mobile station comprises a transmit power control program capable of adjusting a power level of preamble frames transmitted by said mobile station.

However, these features are well known in the art and Raaf is evidence of the fact. Raaf teaches a method for a mobile station to gradually increase the power (i.e., power adjustment) that is used to send a preamble. Furthermore teaches that at the initiation of a communication between a base station and a mobile station begins with an estimation of the initial power of a preamble to be transmitted by the mobile station, after that, the power of the preamble is gradually increased (power ramping) until a base station receives or detects the preamble and sends a corresponding acknowledgement message (note that this is fairly characterized as null frames) to the mobile station and the latter receives or detects the acknowledgement message (Abstract; paragraphs [0033]-[0041]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art to incorporate in the mobile station a transmit power control program capable of adjusting a power level of preamble frames transmitted by said mobile station, as suggested by Raaf, in order for the preamble frames to be transmitted at an adequate power level so that the base station is able to receive the preambles and acknowledge their reception.

**Regarding claim 25**, For use in a wireless network, Applicants' description of the prior art, discloses a method of operating a mobile station during a call set-up procedure, the method comprising the steps of:

transmitting preamble frames from said mobile station to a base station during the call set-up procedure; during the call set-up procedure, detecting in a null frame monitor program of said mobile station null frames from said base station (Fig. 3; page 17, paragraph [0043] of the

specification; during call set up the Base Station 101 sends a series of null frames which are received by the mobile station 111, the mobile station sends preamble frames in response to the null frames).

But, the Applicant's description of the prior does not particularly disclose the step of adjusting a power level of said preamble frames transmitted to said base station by said mobile station.

However, these features are well known in the art and Raaf is evidence of the fact. Raaf teaches a method for a mobile station to gradually increase the power (i.e., power adjustment) that is used to send a preamble. Furthermore teaches that at the initiation of a communication between a base station and a mobile station begins with an estimation of the initial power of a preamble to be transmitted by the mobile station, after that, the power of the preamble is gradually increased (power ramping) until a base station receives or detects the preamble and sends a corresponding acknowledgement message (note that this is fairly characterized as null frames) to the mobile station and the latter receives or detects the acknowledgement message (Abstract; paragraphs [0033]-[0041]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art to comprise the step of adjusting a power level of preamble frames transmitted by said mobile station, as suggested by Raaf, in order for the preamble frames to be transmitted at an adequate power level so that the base station is able to receive the preambles and acknowledge their reception.

**Regarding claims 20 and 26**, the combination of Applicant's description of the prior art and Raaf disclose the mobile station and method as set forth in Claims 19 and 25, Raaf discloses wherein said null frame monitor program of said mobile station is capable of detecting at least one missing null frame from said base station; and wherein in response to said detection of said at least

one missing null frame from said base station, said transmit power control program increases a power level of preamble frames transmitted by said mobile station (paragraphs [0034]-[0041]; the mobile station waits for the reception of an acknowledgement message (i.e., fairly characterized as null frames) for a particular period of time and if no acknowledgement is received within the period of time (i.e., missing null frame), the ideal power is recalculated by incrementing the last ideal power by a power ramp step and sending the preamble frames with the new recalculated ideal power).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the prior art to incorporate in the mobile station a null frame monitor program capable of detecting at least one missing null frame from said base station; and wherein in response to said detection of said at least one missing null frame from said base station, said transmit power control program increases a power level of preamble frames transmitted by said mobile station, as suggested by Raaf, in order for the preamble frames to be transmitted at an adequate power level so that the base station is able to receive the preambles and acknowledge their reception.

**Regarding claims 21 and 27**, the combination of Applicant's description of the prior art and Raaf disclose the mobile station and method as set forth in Claims 20 and 26, Raaf discloses wherein said transmit power control program increases said power level of said preamble frames by a step size having a configurable value (paragraphs [0039]-[0041]).

10. **Claims 22, 23, 28, and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of RAAF et al., and further in view of BROOKS et al.

**Regarding claims 22 and 28**, the combination of Applicant's description of the prior art and Raff disclose the mobile station and method as set forth in Claims 20 and 26, Raaf discloses wherein said mobile station increases power to said preamble frames in relation to a detected

number of missing null frames when said null frame monitor program detects missing null frames from said base station (paragraphs [0034]-[0041]; the mobile station waits for the reception of an acknowledgement message (i.e., fairly characterized as null frames) for a particular period of time and if no acknowledgement is received within the period of time (i.e., missing null frame), the ideal power is recalculated by incrementing the last ideal power by a power ramp step and send the preamble with the new recalculated ideal power).

But, the combination of Applicant's description of the prior art and Raaf fails to particularly disclose wherein the mobile station comprises a fade timer having a configurable value; wherein said mobile station starts said fade timer when said null frame monitor program detects at least one missing null frame from said base station.

However, Brooks teaches a mobile station detect a dropped call due to the loss of the forward traffic channel when the mobile station is unable to receive a usable forward traffic channel for a period of time of typically 5 seconds (i.e., fade timer) (paragraph [0022]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the mobile station to include the features of comprising a fade timer having a configurable value; wherein said mobile station starts said fade timer when said preamble frame detector detects at least one missing frame from said base station (i.e., loss of traffic channel), as suggested by Brooks, because it is well known in the art for a mobile station to comprise a fade timer for detecting the loss of a communication service.

**Regarding claims 23 and 29**, the combination of Applicant's description of the prior art, Raaf, and Brooks disclose the mobile station and method as set forth in Claim 22 and 28, Brooks discloses wherein said mobile station releases said call between said mobile station and said base

station when one of: said fade timer expires and a maximum power level for said preamble frames is exceeded (paragraph [0022]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to include the feature of wherein the mobile station releases said call between said base station and said mobile station when one of: said fade timer expires and a maximum power level for said preamble frames is exceeded, as suggested by Brooks, because it is well known in the art that when mobile station is unable to receive a usable traffic channel for the entire period of time of the fade timer, the connection is terminated or released.

11. **Claims 24 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in views of RAAF et al. and BROOKS et al., and further in view of Chun et al.

**Regarding claims 24 and 30**, of Applicant's description of the prior art, Raaf, and Brooks disclose the mobile station and method as set forth in claims 22 and 28, but fails to particularly disclose wherein said configurable value of said fade time is less than five seconds.

However, Chun teaches that a fade timer can range from 0 to 10 seconds depending on a system operation state, and in his invention is preferably set to 1.2 seconds which is a shorter time than the typical 5 seconds for releasing a call in the prior art (p.0070).

Therefore, it would have been obvious matter of design choice to a person having ordinary skill in the art, to configure said fade timer to a value of less than five seconds, as suggested by Chun, because this value varies depending on the operation of the system and subscriber characteristics.

### *Prior Art of Record*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) STEWART et al. (US 6,169,731 B1) – Method for signal acquisition and power control.

(b) KATAOKA (US 2003/0171124 A1) – Communication traffic control method.

(c) HOFFNECK et al. (US 6,445,686 B1)- Method and apparatus for improving the quality of speech signals transmitted over wireless communication facilities.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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